10/659,531

Section 1

Page 2

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY 0.21

SESSION 0.21

FULL ESTIMATED COST

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 19 OCT 2004 HIGHEST RN 765878-56-6 DICTIONARY FILE UPDATES: 19 OCT 2004 HIGHEST RN 765878-56-6

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at: http://www.cas.org/ONLINE/DBSS/registryss.html

=>

Uploading C:\Program Files\Stnexp\Queries\10659531b.str

chain nodes :

33

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

chain bonds :

18-33

ring bonds :

exact/norm bonds :

1-11 5-7 6-10 7-8 8-9 9-10 10-12 11-13 12-13 17-18 17-22 18-19 18-33 19-20 20-21 21-22 23-27 23-24 24-25 26-27

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 25-26 25-28 26-31 28-29 29-30 30-31

isolated ring systems :

containing 1 : 23 :

10/20/2004

Habte

10/659,531 Page 3

G1:C,S

G2:0,S,N

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 17:Atom 18:Atom 19:Atom 20:Atom 21:Atom 22:Atom 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom 29:Atom 30:Atom 31:Atom 33:CLASS 34:CLASS

## L1 STRUCTURE UPLOADED

=> s l1

SAMPLE SEARCH INITIATED 08:16:20 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 168 TO ITERATE

100.0% PROCESSED 168 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS:

2583 TO 4137

PROJECTED ANSWERS:

0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 sss full

FULL SEARCH INITIATED 08:16:28 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 3246 TO ITERATE

100.0% PROCESSED 3246 ITERATIONS

10 ANSWERS

TOTAL

SEARCH TIME: 00.00.01

L3 10 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS SINCE FILE

ENTRY SESSION

FULL ESTIMATED COST 155.42 155.63

FILE 'CAPLUS' ENTERED AT 08:16:34 ON 20 OCT 2004 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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10/659,531 Page 4

FILE COVERS 1907 - 20 Oct 2004 VOL 141 ISS 17 FILE LAST UPDATED: 19 Oct 2004 (20041019/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 13 L4 1 L3

=> d ibib abs hitstr tot

10/659,531

001 Page 5

A 20030910

L4 ANSWER 1 OF 1
ACCESSION NUMBER:
DOCUMENT NUMBER:
111LE:
1140:287399
Preparation of antidepressant azaheterocyclylmethyl derivatives of 4,5-dihydroimidazo(1,5,4-de)[1,4]benzoxazine
Gao, Hong: Stack, Gary Paul
Weth, John, and Brother Ltd., USA
PCT Int. Appl., 34 pp.
CODEN: PIXXD2
Patent

Patent English

DOCUMENT TYPE: LANGUAGE:

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

DATE

20030911 CA, CH, CN, GB, GD, GE, KZ, LC, LK, NO, NZ, OM, TJ, TM, TN, AM, AZ, BY,

20030910 20020912

OTHER SOURCE(S):

MARPAT 140:287399

ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN (Continued 675825-82-8 CAPLUS IMidazo[1,5,4-de][1,4]benzoxazin-2(1H)-one, 3,6-dihydro-4-(1H-indol-3-y1)-1(2H)-pyridinyl]methyl]-4,5-dihydro- (9CI) (CA INDEX NAME)

675825-83-9 CAPLUS Imidazo[1,5,4-de][1,4]benzoxazin-2(1H)-one, 1-(5-fluozo-1H-indol-3-y1)-3,6-dihydro-1(2H)-pyridinyl]methyl]-4,5-dihydro- (9CI) (CA INDEX NAME)

$$\bigcap_{HN} CH_2 - N \bigcap_{H} \bigcap_{H} P$$

675825-84-0 CAPLUS
Imidazo[1,5,4-de][1,4]benzoxazin-2(1H)-one,
1-(5-chloro-1H-indol-3-y1)3,6-dihydro-1(2H)-pyridinyl]methyl]-4,5-dihydro- (9CI) (CA INDEX NAME)

CAPLUS H-Indole-5-carbonitrile, 3-[1,2,3,6-tetrahydro-1-[(1,2,4,5-tetrahydro-2-oxoimidazo[1,5,4-de][1,4]benzoxazin-4-yl}methyl]-4-pyridinyl]- (9CI) (CF

Habte

ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

$$\mathbb{R}^1$$
 $\mathbb{R}^3$ 
 $\mathbb{R}^3$ 
 $\mathbb{R}^3$ 

The title compds. [I; XY = N:CR4, NHCO, NHCOCO, NHCS, NHSO2; Z = O, S,

ΙI

(wherein R5 = H, alkyl), R1-R3 = H, OH, halo, CN, etc.; R4 = H, halo, (un) substituted NH2; n = 0-2), useful for the treatment of depression (including but not limited to major depressive disorder, childhood depression and dysthymia), anxiety, panic disorder, post-traumatic stress disorder, premenstrual dysphoric disorder (also known as premenstrual syndrome), attention deficit disorder (with and without hyperactivity). Obsessive compulsive disorder, social anxiety disorder, generalized anxiety disorder, obseity, eating disorders such as anorexia nervosa and bulimia nervosa, vasomotor flushing, cocaine and alc. addiction, sexual dysfunction and related illnesses, were prepared Thus, reacting (2-0xo-1,2,4,5-tetrahydroimidazol1,5,4-de)[1,4]benzoxazin-4-yl)methyl 4-methylbenzenesulfonate (preparation given) with 3-(1,2,3,6-tetrahydropyridin-4-yl)-1H-inded in DMSO afforded II. The biol. data such as 5-HT transporter affinity, 5-HTIA receptor affinity, and antagonist activity at

5-HT1A receptors, were given. The pharmaceutical composition comprising

the compound I was claimed. 675825-82-8P 675825-83-9P 675825-84-0P 675825-85-1P 675825-86-2P 675825-95-3P 675825-96-4P 675825-97-5P 675825-98-6P 675825-99-7P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(preparation of antidepressant azaheterocyclylmethyl derivs. of 4,5-dihydroimidazo[1,5,4-de][1,4]benzoxazine)

ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

675825-86-2 CAPLUS Imidazo[1,5,4-de][1,4]benzoxazin-2(1H)-one, 4-(7-fluoro-1H-indol-3-yl)-

3,6-dihydro-1(2H)-pyridinyl]methyl]-4,5-dihydro- (9CI) (CA INDEX NAME)

RN 675825-95-3 CAPLUS
CN Imidazo[1,5,4-de][1,4]benzoxazin-2(1H)-one,
4-[[3,6-dihydro-4-(1H-indol-3-

yl)-1(2H)-pyridinyl]methyl]-4,5-dihydro-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Absolute stereochemistry.

10/20/2004

Page 6

I.4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
RN 675825-97-5 CAPLUS
CON Imidazo[1,5,4-de|[1,4]benzoxazin-2(1H)-one,
4-[(4-(5-chloro-1H-indol-3-yl)3-6-dihydro-1(2H)-pyridinyl]methyl]-4,5-dihydro-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

675825-98-6 CAPLUS 1H-Indole-5-carbonitrile, 3-{1,2,3,6-tetrahydro-1-[[(4S)-1,2,4,5-

tetrahydro-2-oxoimidazo[1,5,4-de][1,4]benzoxazin-4-yl]methyl]-4-pyridinyl]-(9Cl) (CA INDEX NAME)

Absolute stereochemistry.

RN 675825-99-7 CAPLUS
CN Imidazo[1,5,4-de][1,4]benzoxazin-2(1H)-one,
4-[4-(7-fluoro-1H-indol-3-yl)3,6-dihydro-1(2H)-pyridinyl]methyl]-4,5-dihydro-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

REFERENCE COUNT:

THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

10/659,531 Page 3

G1:C,S

G2:0,S,N

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 17:Atom 18:Atom 19:Atom 20:Atom 21:Atom 22:Atom 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom 29:Atom 30:Atom 31:Atom 33:CLASS 34:CLASS 37:CLASS

## L1STRUCTURE UPLOADED

=> d l1L1 HAS NO ANSWERS

STR

G1 C,S G2 O, S, N

Structure attributes must be viewed using STN Express query preparation.

=> s 11

SAMPLE SEARCH INITIATED 08:10:30 FILE 'REGISTRY' SAMPLE SCREEN SEARCH COMPLETED -6 TO ITERATE

6 ITERATIONS 100.0% PROCESSED

O ANSWERS

SEARCH TIME: 00.00.01

\*\*COMPLETE\*\* FULL FILE PROJECTIONS: ONLINE

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 6 TO

266 0 TO PROJECTED ANSWERS:

0 SEA SSS SAM L1 L2

=> s l1 sss full FULL SEARCH INITIATED 08:10:38 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED -162 TO ITERATE

10/20/2004

Habte

10/659,531 Page 4

100.0% PROCESSED 162 ITERATIONS SEARCH TIME: 00.00.01

10 ANSWERS

L3 10 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 155.42 155.63

FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 08:10:44 ON 20 OCT 2004 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

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FILE COVERS 1907 - 20 Oct 2004 VOL 141 ISS 17 FILE LAST UPDATED: 19 Oct 2004 (20041019/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 13 L4 1 L3

=> d ibib abs hitstr tot

10/659,531

Page 5

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS ON STN ACCESSION NUMBER: 2004:252520 CAPLUS DOCUMENT NUMBER: 140:287399

2004:252520 CAPUS
140:287399
Preparation of antidepressant azaheterocyclylmethyl
derivatives of 4,5-dihydroimidazo[1,5,4del [1,4]benzoxazine
Gao, Hong; Stack, Gary Paul
Wyeth, John, and Brother Ltd., USA
PCT Int. Appl., 34 pp.
CODEN: PIXXD2
Parent

INVENTOR (S):

PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE;

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

DATE 20030911
BZ, CA, CH, CN,
FI, GB, GD, GE,
KR, KZ, LC, LK,
MZ, NO, NZ, OM,
SY, TJ, TM, TN,
ZW, AM, AZ, BY,

US 2003-659531 A 20030910

MARPAT 140:287399

OTHER SOURCE(S):

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN (Continued RN 675825-82-8 CAPLUS IMidazo[1,5,4-de][1,4]benzoxazin-2(1H)-one, 4-[[3,6-dhydro-4-(1H-indol-3-y1]-1(2H)-pyridinyl]methyl]-4,5-dihydro- (9CI) (CA INDEX NAME)

675825-83-9 CAPLUS
Imidazo[1,5,4-de][1,4]benzoxazin-2(1H)-one,
4-(5-fluoro-1H-indol-3-yl)3,6-dihydro-1(2H)-pyridinyl]methyl]-4,5-dihydro- (9CI) (CA INDEX NAME)

675825-84-0 CAPLUS
Imidazo[1,5,4-de][1,4]henzoxazin-2(1H)-one,
4-(5-chloro-1H-indol-3-yl)3,6-dihydro-1(2H)-pyridinyl]methyl]-4,5-dihydro- (9CI) (CA INDEX NAME)

675825-85-1 CAPLUS
IH-Indole-5-carbonitrile, 3-[1,2,3,6-tetrahydro-1-[(1,2,4,5-tetrahydro-2
OXOimidazO[1,5,4-de][1,4]benzoxazin-4-yl)methyl]-4-pyridinyl]- (9CI) (CINDEX NAME)

Habte

ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

The title compds. [I; XY = N:CR4, NHCO, NHCOCO, NHCS, NHSO2; Z = O, S,

AB
The title compds. [I; XY = N:CH4, NHCO, NHCO,

5-HT1A receptors, were given. The pharmaceutical composition comprising the

IT

compound I was claimed. 675825-82-8P 675825-83-9P 675825-84-0P 675825-85-1P 675825-86-2P 675825-95-3P 675825-96-1P 675823-97-7P 675825-98-6P 675825-99-7P RI: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

es) (preparation of antidepressant azaheterocyclylmethyl derivs. of 4,5-dihydroimidazo[1,5,4-de][1,4]benzoxazine)

(Continued) ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN

RN 675825-86-2 CAPLUS
CN Imidazo[1,5,4-de][1,4]benzoxazin-2[1H)-one,
4-[[4-(7-fluoro-1H-indol-3-y1)3,6-dihydro-1[2H)-pyridinyl]methyl]-4,5-dihydro- (9CI) (CA INDEX NAME)

RN 675825-95-3 CAPLUS CN Imidazo[1,5,4-de][1,4]benzoxazin-2(1H)-one, 4-[[3,6-dihydro-4-(1H-indol-3-

yl)-1(2H)-pyridinyl]methyl]-4,5-dihydro-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 675825-96-4 CAPLUS
CN Imidazo[1,5,4-de][1,4]benzoxazin-2(1H)-one,
4-[{4-(5-(10uro-1H-indol-3-y1)3,6-dihydro-1(2H)-pyridiny1]methyl]-4,5-dihydro-, (4S)- (9CI) (CA INDEX

Absolute stereochemistry

10/20/2004

Page 6

L4 ANSMER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
RN 675825-97-5 CAPLUS
CN Imidazo[1,5,4-de][1,4]benzoxazin-2(1H)-one,
4-[4-(5-chloro-1H-indol-3-yl)-3,6-dihydro-1(2H)-pyridinyl]methyl]-4,5-dihydro-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

675825-98-6 CAPLUS 1H-Indole-5-carbonitrile, 3-[1,2,3,6-tetrahydro-1-[{{4S}-1,2,4,5-

tetrahydro-2-oxoimidazo[1,5,4-de] [1,4]benzoxazin-4-yl]methyl]-4-pyridinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 675825-99-7 CAPLUS
CN Imidazo[1,5,4-de][1,4]benzoxazin-2(1H)-one,
4-{[4-(7-fluoro-1H-indol-3-yl)3,6-dihydro-1(2H)-pyridinyl]methyl]-4,5-dihydro-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

REFERENCE COUNT:

THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT